

## ALFALFA LOOPER *Lepidoptera: Noctuidae Autographa californica*

### DESCRIPTION

**Adults** have silvery-gray forewings marked with an ivory colored funnel-shaped mark resembling that found on the forewings of cabbage looper. Alfalfa loopers are larger than cabbage loopers and have a wingspan of 30 to 40 mm. **Larvae** are about 25 mm long and closely resemble the cabbage looper in color, but usually have a dark top stripe edged with white lines and two obscure white top-lateral lines. Larvae have three pairs of legs on the thorax and three pairs of prolegs on the abdomen (one pair on segments five and six and one pair on the terminal segment). **Eggs** are round, white to cream colored, and are laid singly on undersides of leaves.

### ECONOMIC IMPORTANCE

The alfalfa looper is more widespread and destructive than the cabbage or celery looper. Larvae feed on leaves causing ragged-edged holes in the leaf and on the leaf margins. The major damage caused by larvae and pupae is contamination of the heads of cole crops and processed foods, and defoliation of potatoes, peas, sugarbeets, alfalfa, beans, mint, and spinach.

### DISTRIBUTION AND LIFE HISTORY

This pest is distributed throughout the United States and parts of Canada. Alfalfa loopers overwinter as pupae either in soil or in trash near the base of host plants. Moths begin emerging in late April and May and adults lay eggs singly on weed hosts (mostly wild crucifers). Eggs hatch in three to five days and larvae feed for about two weeks before pupating in cocoons on the host plant or in trash. The total development time from egg to egg requires about 30 days. Adults emerge in about seven days, mate, and females deposit eggs as before about three days after emerging. Damage is most evident in June and July and again in September and October. There are three or four generations each year.

### MANAGEMENT AND CONTROL

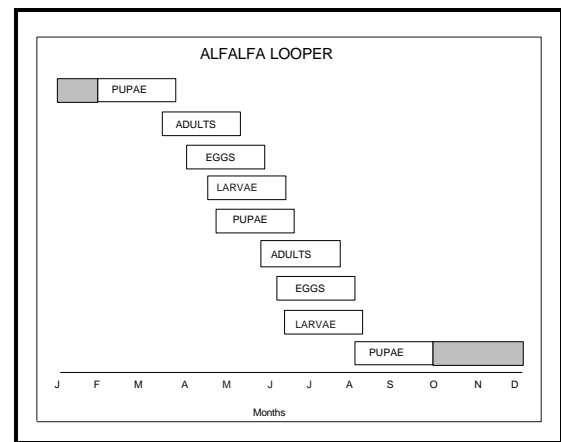
A virus disease and several predators and parasites often reduce the looper population, but the population of natural enemies may not be sufficient to reduce heavy infestations. Insecticides may be used to prevent damage by this pest, but fields should be sampled prior to treatment to establish the need for



Alfalfa looper larva



Alfalfa looper adult



treatment. Insecticides are much more effective against small larvae. Use a sweep net to sample for large larvae (15 - 25 mm long). Take 100 sweeps in groups of 10 in different areas of the field and along the margins. *Bacillus thuringiensis kurstaki* (Btk) has been used successfully to control loopers in some crops, but multiple applications may be necessary for control.

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